

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04N 3/15, 9/04		A3	(11) International Publication Number: WO 99/04555 (43) International Publication Date: 28 January 1999 (28.01.99)									
(21) International Application Number: PCT/IB98/00917 (22) International Filing Date: 11 June 1998 (11.06.98) (30) Priority Data: 97401700.6 15 July 1997 (15.07.97) EP (34) Countries for which the regional or international application was filed: FR et al. (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). (71) Applicant (for SE only): PHILIPS AB [SE/SE]; Kottbygatan 7, Kista, S-164 85 Stockholm (SE). (72) Inventors: JASPERS, Cornelis, Antonie, Maria; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). DELAGE, Eric; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HOS- TIOU, Phillipe; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). (74) Agent: STEENBEEK, Leonardus, J.; Internationaal Octrooi- reau B.V., P.O. Box 220, NL-5600 AE Eindhoven (NL).		(81) Designated States: JP, KR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report. (88) Date of publication of the international search report: 8 April 1999 (08.04.99)										
(54) Title: COLOR SAMPLE INTERPOLATION												
<div style="text-align: center;"><table border="1"><tr><td></td><td>G3</td><td></td></tr><tr><td>G1</td><td>R/B</td><td>G2</td></tr><tr><td></td><td>G4</td><td></td></tr></table></div>					G3		G1	R/B	G2		G4	
	G3											
G1	R/B	G2										
	G4											
(57) Abstract												
<p>In a method of interpolating a color sample in a signal (RGBin) having alternately colored samples, the missing color sample is interpolated in dependence upon neighbouring color samples (G1, G2, G3, G4) of the same color (G) as the color sample to be interpolated, and a differently colored sample (R/B) from the same location as the color sample to be interpolated.</p>												

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 98/00917

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04N 3/15, H04N 9/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5333055 A (HARUHIKO MURATA ET AL), 26 July 1994 (26.07.94), column 5, line 12 - line 44; column 7, line 63 - column 8, line 2; column 9, line 6 - column 12, line 12, abstract	1-4,6-11, 14-16
A	--	5,12-13
Y	US 5119180 A (SATORU OKAMOTO), 2 June 1992 (02.06.92), column 5, line 12 - column 9, line 30, abstract	1-4,6-11, 14-16
A	--	5,12-13
A	US 5629734 A (JOHN F. HAMILTON, JR. ET AL), 13 May 1997 (13.05.97), abstract	4-16
	--	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"B" earlier document but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

Date of mailing of the international search report

14 January 1999

18 -01- 1999

Name and mailing address of the ISA:

Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Michel Gascoin

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 98/00917

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5382976 A (ROBERT H. HIBBARD), 17 January 1995 (17.01.95), abstract --	1-16
A	US 5552825 A (RAJENDRA K. TALLURI ET AL), 3 Sept 1996 (03.09.96), abstract -- -----	1-16

INTERNATIONAL SEARCH REPORT

Information on patent family members

01/12/98

International application No.

PCT/IB 98/00917

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5333055 A	26/07/94	JP 2698276 B JP 6046431 A JP 2686203 B JP 6046305 A JP 2513554 B JP 6292211 A	19/01/98 18/02/94 08/12/97 18/02/94 03/07/96 18/10/94
US 5119180 A	02/06/92	JP 2166987 A JP 2660567 B	27/06/90 08/10/97
US 5629734 A	13/05/97	EP 0732859 A JP 8298669 A	18/09/96 12/11/96
US 5382976 A	17/01/95	EP 0632663 A JP 7059098 A	04/01/95 03/03/95
US 5552825 A	03/09/96	NONE	

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.